

CLAIMS:

1. A method for maintaining information regarding multiple instances of an activity, each instance having an active condition in which information about the instance is to be modified or an inactive condition in which information about the instance is not to be modified, the method comprising:

 creating a record in a first database table for each of the multiple instances in the active condition, each record containing a field for each of a plurality of data types, one or more of the fields in each active instance record having a value indicative of the active condition;

 assigning, for records of the multiple instances in the inactive condition, values to the one or more fields indicative of the inactive condition;

 deleting from the first table records of instances having values in the one or more fields indicative of the inactive condition; and

 creating, for records deleted from the first table, a corresponding record in a second database table.

2. The method of claim 1, wherein no record of the second table is updated after being created.

3. The method of claim 1, wherein the inactive condition corresponds to an instance of the activity being complete.

4. The method of claim 1, wherein data in a first table record at the time of deletion is copied to the corresponding second table record.
5. The method of claim 1, wherein substantially all of the data in a first table record at the time of deletion is copied to the corresponding second table record.
6. The method of claim 1, wherein the first table contains only records for instances in the active condition.
7. The method of claim 1, wherein the one or more of the fields comprises a flag having a first value if an instance is active and a second value if an instance is inactive.
8. The method of claim 1, wherein the one or more of the fields comprises a field containing, for inactive instance records, a time of completion of the instance.
9. The method of claim 1, further comprising:
creating a view comprising the first and second tables.
10. The method of claim 1, further comprising:
creating a third database table;
ceasing creation of records in the second table; and
creating, for each of the records deleted from the first table after creation of the third table, a corresponding record in the third table.

11. The method of claim 10, wherein said creating a third database table comprises creating the third database table after a preset time period has elapsed.
12. The method of claim 10, further comprising:
deleting the second database table.
13. The method of claim 10, further comprising:
renaming the second database table.
14. The method of claim 10, further comprising:
creating subsequent database tables;
ceasing, upon creation of a subsequent table, creation of records in the previously-created table; and
creating, for each of the records deleted from the first table after creation of the last-created table but before creation of another subsequent table, a corresponding record in the last-created table.
15. The method of claim 14, further comprising:
deleting a subsequently created table for each newly created table upon the number of tables reaching a predetermined level.

16. The method of claim 15, further comprising archiving a copy of a table prior to deletion.

17. The method of claim 14, further comprising:
creating a view comprising the non-deleted tables.

18. The method of claim 14, wherein said creating a subsequent database table comprises
renaming the previously-created table.

19. The method of claim 1, further comprising:
generating analysis data based on data in the first and second tables.

20. The method of claim 19, wherein said generating analysis data further comprises:
generating a first Online Analytical Processing (OLAP) cube for records in the
first table,
generating a second OLAP cube for records in the second table, and
combining the first and second cubes into a virtual OLAP cube.

21. The method of claim 20, wherein said generating a second OLAP cube comprises
obtaining records from the second table, and further comprising:
assigning a unique incremental identifier value to each record in the second table;
storing the incremental identifier value for the last record obtained to generate the
second OLAP cube;

subsequently obtaining additional records from the second table, the additional records not being processed to form the second OLAP cube; and updating the second OLAP cube based on the additional records.

22. The method of claim 21, wherein:

 said generating a second OLAP cube comprises inputting data from second table records into a star-schema and storing said star-schema after generation of the second OLAP cube, and

 said updating the second OLAP cube comprises modifying the stored star-schema and using data from the additional second table records and regenerating the second OLAP cube based on the modified star-schema.

23. A computer-readable medium having stored thereon data representing sequences of instructions which, when executed by a processor, cause the processor to perform steps comprising:

 creating a record in a first database table for each of multiple instances of an activity, wherein:

 each instance has an active condition in which information about the instance is to be modified or an inactive condition in which information about the instance is not to be modified,

 the first table records are created for instances in the active condition, and

each record of the first table contains a field for each of a plurality of data types, one or more of the fields in each active instance record having a value indicative of the active condition;

assigning, for records of the multiple instances in the inactive condition, values to the one or more fields indicative of the inactive condition;

deleting from the first table records of instances having values in the one or more fields indicative of the inactive condition; and

creating, for records deleted from the first table, a corresponding record in a second database table.

24. The computer-readable medium of claim 23, wherein no record of the second table is

updated after being created.

25. The computer-readable medium of claim 23, wherein the inactive condition

corresponds to an instance of the activity being complete.

26. The computer-readable medium of claim 23, wherein data in a first table record at the

time of deletion is copied to the corresponding second table record.

27. The computer-readable medium of claim 23, wherein substantially all of the data in a

first table record at the time of deletion is copied to the corresponding second table record.

28. The computer-readable medium of claim 23, wherein the first table contains only records for instances in the active condition.

29. The computer-readable medium of claim 23, wherein the one or more of the fields comprises a flag having a first value if an instance is active and a second value if an instance is inactive.

30. The computer-readable medium of claim 23, wherein the one or more of the fields comprises a field containing, for inactive instance records, a time of completion of the instance.

31. The computer-readable medium of claim 23, comprising further instructions for performing steps comprising:
creating a view comprising the first and second tables.

32. The computer-readable medium of claim 23, comprising further instructions for performing steps comprising:
creating a third database table;
ceasing creation of records in the second table; and
creating, for each of the records deleted from the first table after creation of the third table, a corresponding record in the third table.

33. The computer-readable medium of claim 32, wherein said creating a third database table comprises creating the third database table after a preset time period has elapsed.

34. The computer-readable medium of claim 32, comprising further instructions for performing steps comprising:

deleting the second database table.

35. The computer-readable medium of claim 32, comprising further instructions for performing steps comprising:

renaming the second database table.

36. The computer-readable medium of claim 32, comprising further instructions for performing steps comprising:

creating subsequent database tables;
ceasing, upon creation of a subsequent table, creation of records in the previously-created table; and
creating, for each of the records deleted from the first table after creation of the last-created table but before creation of another subsequent table, a corresponding record in the last-created table.

37. The computer-readable medium of claim 36, comprising further instructions for performing steps comprising:

deleting a subsequently created table for each newly created table upon the number of tables reaching a predetermined level.

38. The computer-readable medium of claim 37, comprising further instructions for performing steps comprising archiving a copy of a table prior to deletion.

39. The computer-readable medium of claim 36, comprising further instructions for performing steps comprising:

creating a view comprising the non-deleted tables.

40. The computer-readable medium of claim 36, wherein said creating a subsequent database table comprises renaming the previously-created table.

41. The computer-readable medium of claim 23, comprising further instructions for performing steps comprising:

generating analysis data based on data in the first and second tables.

42. The computer-readable medium of claim 41, wherein said generating analysis data further comprises:

generating a first Online Analytical Processing (OLAP) cube for records in the first table,

generating a second OLAP cube for records in the second table, and
combining the first and second cubes into a virtual OLAP cube.

43. The computer-readable medium of claim 42, wherein said generating a second OLAP cube comprises obtaining records from the second table, and comprising further instructions for performing steps comprising:

assigning a unique incremental identifier value to each record in the second table;

storing the incremental identifier value for the last record obtained to generate the second OLAP cube;

subsequently obtaining additional records from the second table, the additional records not being processed to form the second OLAP cube; and

updating the second OLAP cube based on the additional records.

44. The computer-readable medium of claim 43, wherein:

said generating a second OLAP cube comprises inputting data from second table records into a star-schema and storing said star-schema after generation of the second OLAP cube, and

said updating the second OLAP cube comprises modifying the stored star-schema and using data from the additional second table records and regenerating the second OLAP cube based on the modified star-schema.

45. A data processing apparatus for maintaining information regarding multiple instances of an activity, each instance having an active condition in which information about the instance is to be modified or an inactive condition in which information about the instance is not to be modified, comprising:

at least one data storage device;
at least one user input device; and
a processor operatively connected to said storage device and said user input device,
wherein the at least one data storage device has stored thereon a set of instructions which,
when executed, configure said processor to:

create a record in a first database table for each of the multiple instances in the active condition, each record containing a field for each of a plurality of data types, one or more of the fields in each active instance record having a value indicative of the active condition,

assign, for records of the multiple instances in the inactive condition, values to the one or more fields indicative of the inactive condition,

delete from the first table records of instances having values in the one or more fields indicative of the inactive condition, and

create, for records deleted from the first table, a corresponding record in a second database table.

46. The data processing apparatus of claim 45, wherein the set of instructions includes additional instructions which, when executed, configure said processor to:

generate a first Online Analytical Processing (OLAP) cube for records in the first table,

generate a second OLAP cube for records in the second table, and
combining the first and second cubes into a virtual OLAP cube.

Patent Application

47. A method for incrementally generating analysis data for instances of an activity, each instance having an active condition in which information about the instance is to be modified or an inactive condition in which information about the instance is not to be modified, the method comprising:

generating a first Online Analytical Processing (OLAP) cube by processing an initial collection of database records associated with instances in the active condition; generating a second OLAP cube by processing an initial collection of database records associated with instances in the inactive condition; and combining the first and second cubes into a virtual OLAP cube.

48. The method of claim 47, further comprising:

identifying a subsequent collection of inactive instances records not processed to form the second OLAP cube; and updating the second OLAP cube based on the subsequent collection.

49. The method of claim 48, further comprising:

generating a subsequent first OLAP cube for a subsequent collection of active instances database records; and combining the subsequent first OLAP cube and the updated second OLAP cube into a subsequent virtual OLAP cube, wherein:

the subsequent collection of active instances database records includes active instances records not processed to generate the first OLAP cube, and

the subsequent collection of inactive instances database records includes records associated with instances which were active when the first OLAP cube was generated and for which associated active instances records were processed to generate said first OLAP cube.